

METHODS AND SYSTEMS FOR SELECTIVE INTERLEAVING IN  
RETRANSMISSIONS AND ITERATIVE DEMODULATION OF MODULATED  
SIGNALS WITH DIFFERENT INTERLEAVING

ABSTRACT OF THE DISCLOSURE

Methods and systems for iterative demodulation of a message are provided. A first copy of the message is received to provide a first set of symbols associated with the message. A second copy of the message is received to provide a second set of symbols. The first copy is associated with a first interleaving pattern and the second copy is  
5 associated with a second interleaving pattern different from the first interleaving pattern. The first set of symbols and the second set of symbols are iteratively demodulated using extrinsic information associated with the first set of symbols for demodulation of the second set of symbols and extrinsic information associated with the second set of  
symbols for demodulation of the first set of symbols to provide a set of symbol estimates  
10 for the message. Transmit methods and systems for selective interleaving to generate the copies of the message in a retransmission based communication system are also provided.